

WHAT IS CLAIMED IS:

1. A method of automatically checking for an incorrect e-mail address in an outgoing e-mail communication, comprising the steps of:

(a) storing a list of domain names in a memory;

5 (b) checking if a domain name of the e-mail address provided in the e-mail communication is included in the list of domain names in the memory; and

(c) generating a prompt for a user to confirm an e-mail address if the domain name is not included in the list of domain names.

10 2. The method of checking for an incorrect e-mail address according to claim 1, further comprising the step of extracting a domain name from each e-mail address provided in the outgoing e-mail communication, wherein the e-mail communication is transmitted after checking each extracted domain name in the list of domain names, and confirming each e-mail address for which the extracted
15 domain name is not included in the list of domain names.

20 3. The method of checking for an incorrect e-mail address according to claim 1, wherein the domain names in the list of domain names stored in the memory are extracted from senders' e-mail addresses from incoming e-mail communications.

4. The method of checking for an incorrect e-mail address according to claim 1, further comprising the steps of receiving a corrected e-mail address from the user in response to the prompt; and repeating the steps of checking a corrected domain name and generating a prompt if the corrected domain name is not included
5 in the list of domain names, until the user either confirms that the domain name provided in the e-mail address is correct or provides a domain name that is in the list of domain names.

10 5. The method of checking for an incorrect e-mail address according to claim 1, wherein the outgoing e-mail communication is intercepted in an e-mail server to check the domain name in the e-mail address prior to transmission.

15 6. The method of checking for an incorrect e-mail address according to claim 5, wherein the prompt is an e-mail message from the e-mail server to the user.

7. The method of checking for an incorrect e-mail address according to claim 5, wherein the prompt is a network message to the user.

8. A method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications prior to transmission by an e-mail communications server, comprising the steps of:

(a) extracting domain names in senders' e-mail addresses from e-mail communications incoming to the email communications server;

(b) storing extracted domain names in a domain name database;

(c) receiving outgoing e-mail communications from client computers connected to the e-mail communications server through a local network;

(d) searching the domain name database for domain names spelled similarly to the domain names in e-mail addresses provided in the outgoing e-mail communications; and

(e) generating an error prompt upon detecting that a domain name in an e-mail address provided in an outgoing e-mail communication is misspelled.

9. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 8, wherein the step of searching for similarly spelled domain names is performed by checking each alpha-numeric character comprised in the extracted domain name with the alpha-numeric characters comprised in the domain names in the database, and detecting when there is at least one but no more than a maximum number of discrepancies between a domain name in the domain name database and the extracted domain name.

10. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 8, wherein the step of searching for similarly spelled domain names is performed by removing an alpha-numeric character from the extracted domain name and searching the domain name database for a domain name consisting of at least each of the remaining alpha-numeric characters in the extracted domain name.

11. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 8, wherein the step of searching for similarly spelled domain names is performed by comparing the extracted domain name with reference domain names stored in the domain name database according to predetermined spelling grammar algorithms.

12. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 8, wherein the error prompt is an e-mail message from the e-mail server to the client computer transmitting the e-mail communication.

13. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 8, wherein the error prompt is a network message from the e-mail server to the client computer transmitting the e-mail communication.

14. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 8, further comprising the step of determining whether extracted domain names are already stored in the domain name database, whereby only a single copy of an extracted domain name is stored in the domain name database.

15. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 14, further comprising the step of storing tally information in the domain name database to tally the frequency in which domain names in the domain name database are extracted from incoming e-mail communications.

16. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 15, further comprising the step of deleting domain names from the domain name database that are not frequently extracted from incoming e-mail communications according to respective tally information.

17. The method of automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 16, wherein the tally

$$\begin{aligned} \text{(1)} \quad & \frac{1}{n} \sum_{i=1}^n \frac{1}{\sigma_i^2} \left(\frac{1}{\sigma_i^2} \right) = \frac{1}{n} \sum_{i=1}^n \frac{1}{\sigma_i^4} \\ \text{(2)} \quad & \frac{1}{n} \sum_{i=1}^n \frac{1}{\sigma_i^2} \left(\frac{1}{\sigma_i^2} \right) = \frac{1}{n} \sum_{i=1}^n \frac{1}{\sigma_i^4} \\ \text{(3)} \quad & \frac{1}{n} \sum_{i=1}^n \frac{1}{\sigma_i^2} \left(\frac{1}{\sigma_i^2} \right) = \frac{1}{n} \sum_{i=1}^n \frac{1}{\sigma_i^4} \end{aligned}$$

18. An e-mail server for automatically checking for misspelled e-mail addresses in outgoing e-mail communications prior to transmission by an e-mail communications server, comprising:

(a) an interceptor for extracting domain names from e-mail addresses provided in incoming and outgoing e-mail communications;

(b) a domain name database for storing domain names extracted from senders' e-mail addresses in incoming e-mail communications; and

(c) a checker for searching the domain name database for domain names spelled similarly to the domain names in e-mail addresses provided in the outgoing e-mail communications,

wherein the e-mail server detects misspelled domain names in e-mail addresses in outgoing e-mail communications.

19. The e-mail server for automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 18, further comprising:

(d) an internal network communications interface for receiving outgoing e-mail communications to be transmitted from client computers and sending incoming e-mail communications to client computers,

wherein the e-mail checker generates an error prompt when detecting a misspelled domain name, which is transmitted from the internal network

communications interface to the client computer requesting transmission of the corresponding outgoing e-mail communication.

20. The e-mail server for automatically checking for misspelled e-mail addresses in outgoing e-mail communications according to claim 19, further comprising:

(e) an external network communications interface for receiving incoming e-mail communications from an external network and sending outgoing e-mail communications transmitted from client computer connected to the internal network,

wherein outgoing e-mail communications are transmitted from the external network communications interface to the external network after the checker confirms e-mail address spelling in the outgoing e-mail communications.

21. A method of automatically checking for an incorrect e-mail address in an outgoing e-mail communication, comprising the steps of:

(a) storing a list of e-mail addresses in a memory;

(b) checking if an e-mail address in the e-mail communication is included in

5 the list of e-mail addresses in the memory; and

(c) generating a prompt for a user to confirm an e-mail address if the domain name is not included in the list of e-mail addresses.

22. The method of automatically checking for an incorrect e-mail address in an outgoing e-mail communication according to claim 21, wherein the e-mail addresses in the list of e-mail addresses stored in the memory are senders' e-mail addresses extracted from incoming e-mail communications.

23. The method of automatically checking for an incorrect e-mail address in an outgoing e-mail communication according to claim 22, further comprising the step of storing tally information in the memory to tally the frequency by which the e-mail addresses are extracted from incoming e-mail communications.

24. The method of automatically checking for an incorrect e-mail address in an outgoing e-mail communication according to claim 23, further comprising the step of deleting e-mail addresses from the memory that are not frequently extracted from incoming e-mail communications according to respective tally information.

25. The method of automatically checking for an incorrect e-mail address in an outgoing e-mail communication according to claim 21, wherein the memory is in an e-mail address directory in a client computer system.

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26. An e-mail communications system stored in a client computer for automatically checking for incorrect e-mail addresses provided in outgoing e-mail communications from the client computer prior to transmission to an e-mail server, comprising:

10 (a) an address extractor for extracting senders' e-mail addresses from incoming e-mail communications;

(b) a memory for storing e-mail addresses extracted from senders' e-mail addresses in incoming e-mail communications; and

15 (c) a checker for searching the memory for e-mail addresses that are provided in outgoing e-mail communications,

wherein the checker generates a prompt upon detecting that an e-mail address in an outgoing e-mail communication is not present in the memory.

27. The e-mail communications system stored in a client computer for
20 automatically checking for incorrect e-mail addresses according to claim 26, wherein the memory is included in an e-mail address directory.

